

Abstract

The present invention is generally related towards enhancing the yield and/or cold-flow properties of certain hydrocarbon products, increasing the degree of isomerization in a diesel product and/or increasing the production rate of a diesel product. The embodiments generally include reducing the residence time of lighter hydrocarbon fractions during hydrocracking, thereby decreasing secondary cracking, by various configurations of introducing at least two hydrocarbon feedstreams of different boiling ranges at different entry points in a hydrocracking unit. A method further includes forming a hydrocarbons stream comprising primarily C₅₊ Fischer-Tropsch hydrocarbon products; fractionating hydrocarbons stream to form at least a wax fraction and an intermediate fraction which serve as separate feedstreams to a hydrocracking unit comprising at least two hydroconversion zones. One embodiment comprises the use of a bifunctional catalyst in one of the hydrocracking zones so as to favor hydroisomerization of hydrocarbons to favor the formation of branched paraffins boiling in the diesel range.